



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

SOLD
Feb-18

D4909-1

Job Sheet 171036



Part No: D4909-1

Job Qty: 6 ea

Part Name: Support



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/26/18

Job Tracking No:

Due Date: 2/20/18

Created By: Linda Lacelle

Type: SOLD

Description:

Note: DWG REV A SHEETS 1,2 IPP REV:A NEW ISSUE 13-04-24 JLM VERIFIED BY:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea		2/19/18	0.00	0.00	Start Up Machining-3		Kt 18-02-07
100	CNC Vertical Machining	6 pcs		2/20/18	0.74	0.00	HAAS1-5		Kt 18-02-07
110	QC	6 pcs		2/20/18	0.00	0.00	QC2 Machining-3		Kt 18-02-07
120	QC	6 pcs		2/20/18	0.00	0.00	QC8 Machining-3		J.F 18-02-12
130	Packaging	6 pcs		2/20/18	0.00	0.00	Packaging3-2		AB FEB 12 2018
140	QC21-SA	6 Ea		2/20/18	0.00	0.00	QC21		

Part Op 100 - Machine as per Folio FB209
Descriptions: 130 - LOCATION : LG053

DAS
21
9-00

FEB 12 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D4909-1TRN	Support Turning Detail	6 Ea (1 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D4909-1TRN	6	0	0

Part Specifications

Specifications could not be found.

Plex 1/26/18 7:31 AM dart.lacelle.linda

6171037

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS					
	Rework ☐	Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐			

Date : _____	Step #: _____	QTY Effective : _____	MRB (QSI042) Approval _____
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Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification

Root Cause		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐
Design ☐	Operator ☐	Bending ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wav ☐
Material ☐	Use for Testing ☐	Cuffs ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐
Past Expiry Date ☐	Manufacturing Process ☐	
Misidentified ☐	Past Due ☐	OTHER : _____

Job No: 171036
Start up Operation 02/07/18

Change No: _____
Operation: _____
Revision: _____
PART NO: D4909 - 1
Original Serial #: S039781
Support



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com



DART AEROSPACE LTD		Work Order: 171036
Description: Support		Part Number: D4909-1
Inspection Dwg: D4909	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5	
Milling Section									
A-A	1.051	1.071		1.062	1.059	1.058	1.060	1.060	
B-B	0.513	0.533		0.517	0.519	0.513	0.514	0.523	
C-C	R0.053	R0.073		0.063	0.063	0.063	0.063	0.063	
D-D	2.465	2.485		2.475	2.474	2.473	2.473	2.473	
E-E	3.550	3.560		3.551	3.560	3.558	3.558	3.560	
F-F	0.315 x 0.065	0.335 x 0.085		0.325 x 0.075	0.325 x 0.075	0.325 x 0.075	0.325 x 0.075	0.325 x 0.075	
G-G	1.990	2.010		2.002	1.998	1.9975	2.000	2.000	
H-H	0.625	0.630		0.625	0.625	0.625	0.625	0.625	
I-I	R0.645	R0.660		0.650	0.650	0.650	0.650	0.650	
J-J	R0.220	R0.280		0.250	0.250	0.250	0.250	0.250	
K-K	0.620	0.630		0.625	0.625	0.625	0.625	0.625	
L-L									
M-M	Ensure 0.625" bore is perpendicular to 1.639" bore								
N-N	within 0.005								
O-O									
P-P	Accept/Reject			0.002					
Q-Q									
R-R									
Accept/Reject									

Measured by: MM 2018/02/05 DAS	Date:
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Audited by: 20 9-89	Date: 18-02-12
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Preliminary Approval:	Date:
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Rev	Date	Change	Revised by	Approved
A	14.07.07	New Issue	KJ	

Chis
+

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

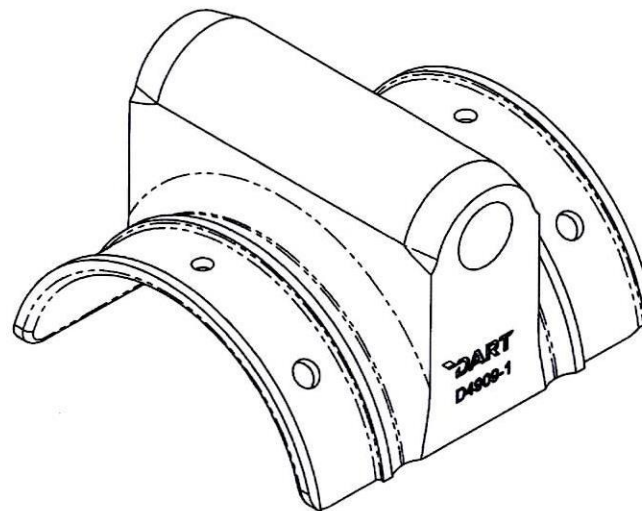
DART AEROSPACE LTD		Work Order: 171036
Description: Support		Part Number: D4909-1
Inspection Dwg: D4909	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

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B-B	0.513	0.533		0.523				
C-C	R0.053	R0.073		0.063				
D-D	2.465	2.485		2.473				
E-E	3.550	3.560		3.560				
F-F	0.315 x 0.065	0.335 x 0.085		0.325 x 0.075				
G-G	1.990	2.010		2.006				
H-H	0.625	0.630		0.625				
I-I	R0.645	R0.660		0.650				
J-J	R0.220	R0.280		0.250				
K-K	0.620	0.630		0.625				
L-L								
M-M								
N-N								
O-O								
P-P								
Q-Q								
R-R								
Accept/Reject								

Measured by: DAS 1 KK	Date: 18-02-07
Audited by: 9-89 DAS 20 9-89	Date: 18-02-12
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	14.07.07	New Issue	KJ	



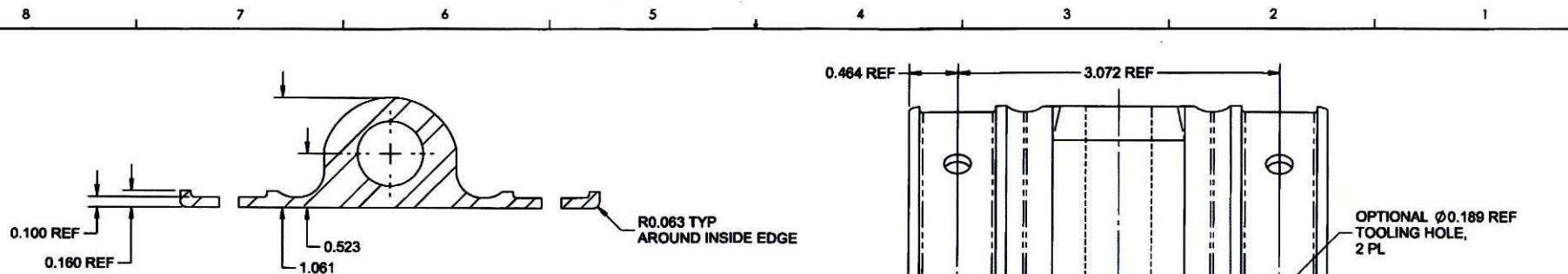
D4909-1 SUPPORT

RELEASED
2013-08-06

NOTES:

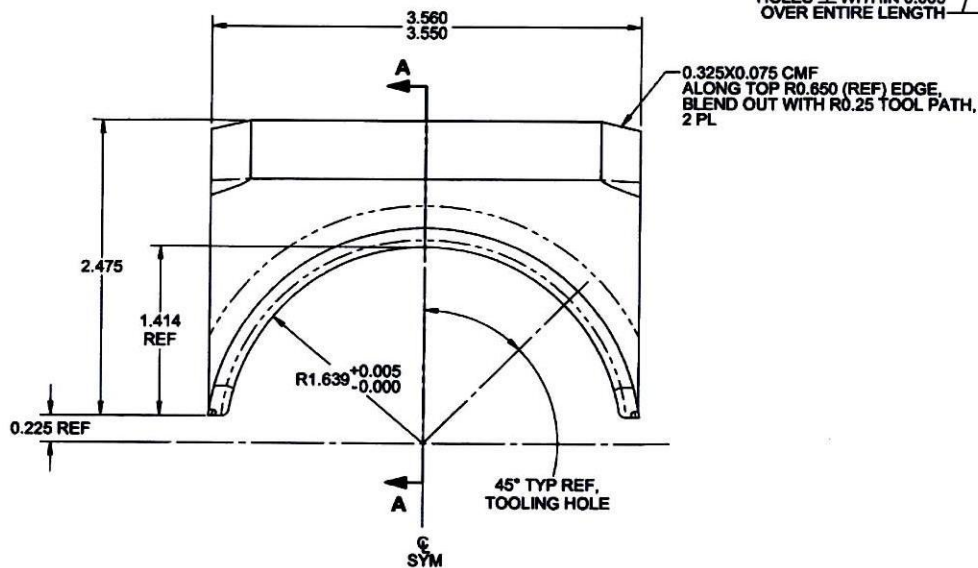
- 1) MATERIAL: MAKE FROM D4909-1TRN
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART LOGO AND P/N "D4909-1" IN INDICATED AREA
USING 0.125 HIGH X 0.010-0.020 DEEP LETTERING PER DART QSI 044 6.3,
IDENTIFY WITH DART B/N PER DART QSI 044 6.1
- 7) WEIGHT: 1.90 lbs

A	NEW ISSUE	CP	13.04.08
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4909	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SUPPORT	NTS
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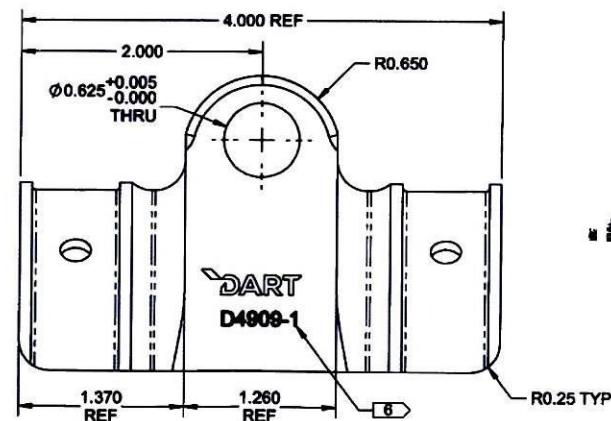


SECTION A-A
SCALE 1X

HOLES $\perp$ WITHIN 0.005 OVER ENTIRE LENGTH

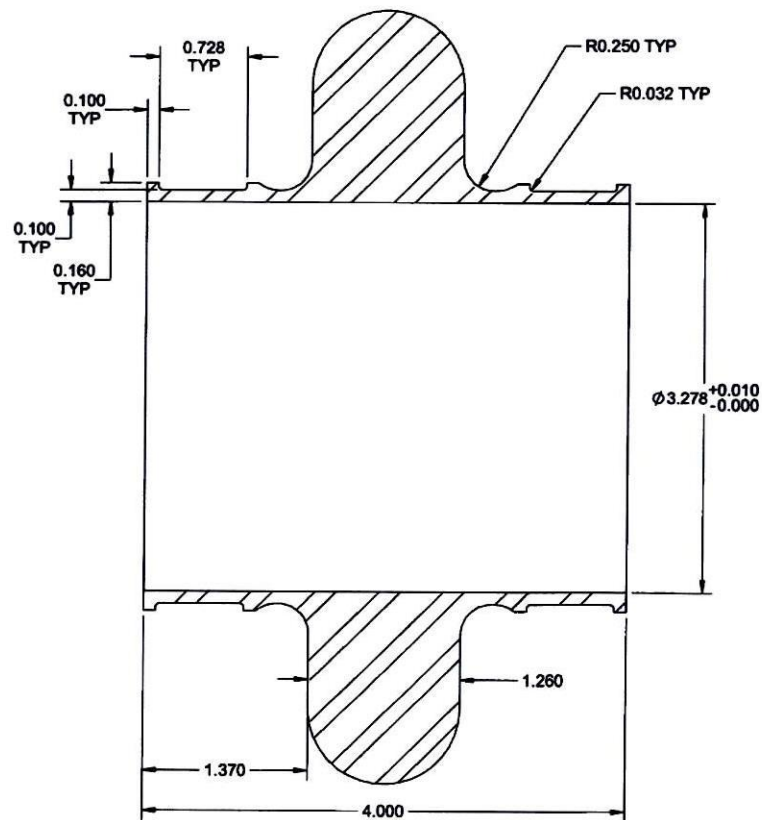


D4909-1 SUPPORT

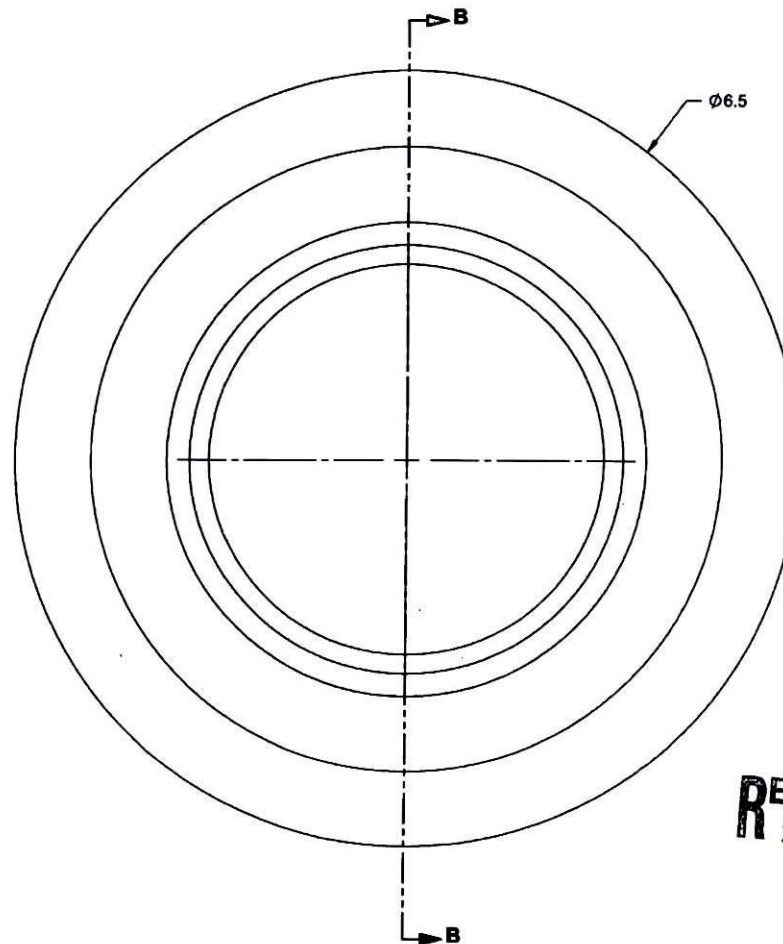


RELEASED
2013-08-06

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DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D4909	REV. A
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SECTION B-B



D4909-1TRN TURNING DETAIL

RELEASED
2013-08-06

NOTES:

- 1) MATERIAL: 17-4PH / S17400 / TYPE 630 ROUND BAR PER AMS 5643 / ASTM A564, REF DART SPEC. M17-4-R
HEAT TREAT TO H900 CONDITION (900 °F FOR 1 HR, AIR COOL)
MIN UTS = 170 KSI (38 HRc)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 9.1 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
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